Mikhaylichenko N. G.

AUTHOR: Mikhaylichenko, N. G.

TITLE: Method of Determining the Mechanical Characteristics of the Metal of a Specimen under Torsion (Sposob opredeleniya mekhanicheskikh kharakteristik metalla obraztsa pri kruchenii)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, No. 1, pp. 83-87 (U.S.S.R.)

ABSTRACT: The article shows the possibility of determining the basic machanical characteristics of the metal of a specimen directly by automatically recording the curve of torsion. The original description of the method is to be found in a previous article as indicated in Reference 4. This article limits itself to data on different kinds of steel analysis by graphs, drawings and tables, namely: curves of torsion of a solid cylinder specimen, form of specimen, peaks on curve $M = \phi(\varphi)$, graph for determining the magnitude of τ_{pk}, τ_{p}, and t_s on a self-recorded torsion curve, comparison of high and low peaks, effect of form of cross section, deviation of the magnitudes of τ_{p}, t_s, t_k. The conclusion is drawn that the low peak on the curve $M = \phi(\varphi)$ depends very little on the form of the specimen and therefore has greater practical significance for the characteristic of the properties of the material. With self-recording of resistance of metal

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Method of Determining the Mechanical Characteristics of the Metal of a Specimen under Torsion

to deformation under torsion, it is possible to determine the limits of proportionality, fluidity and strength as well as the relative and true displacement. There are 6 Slavic references.

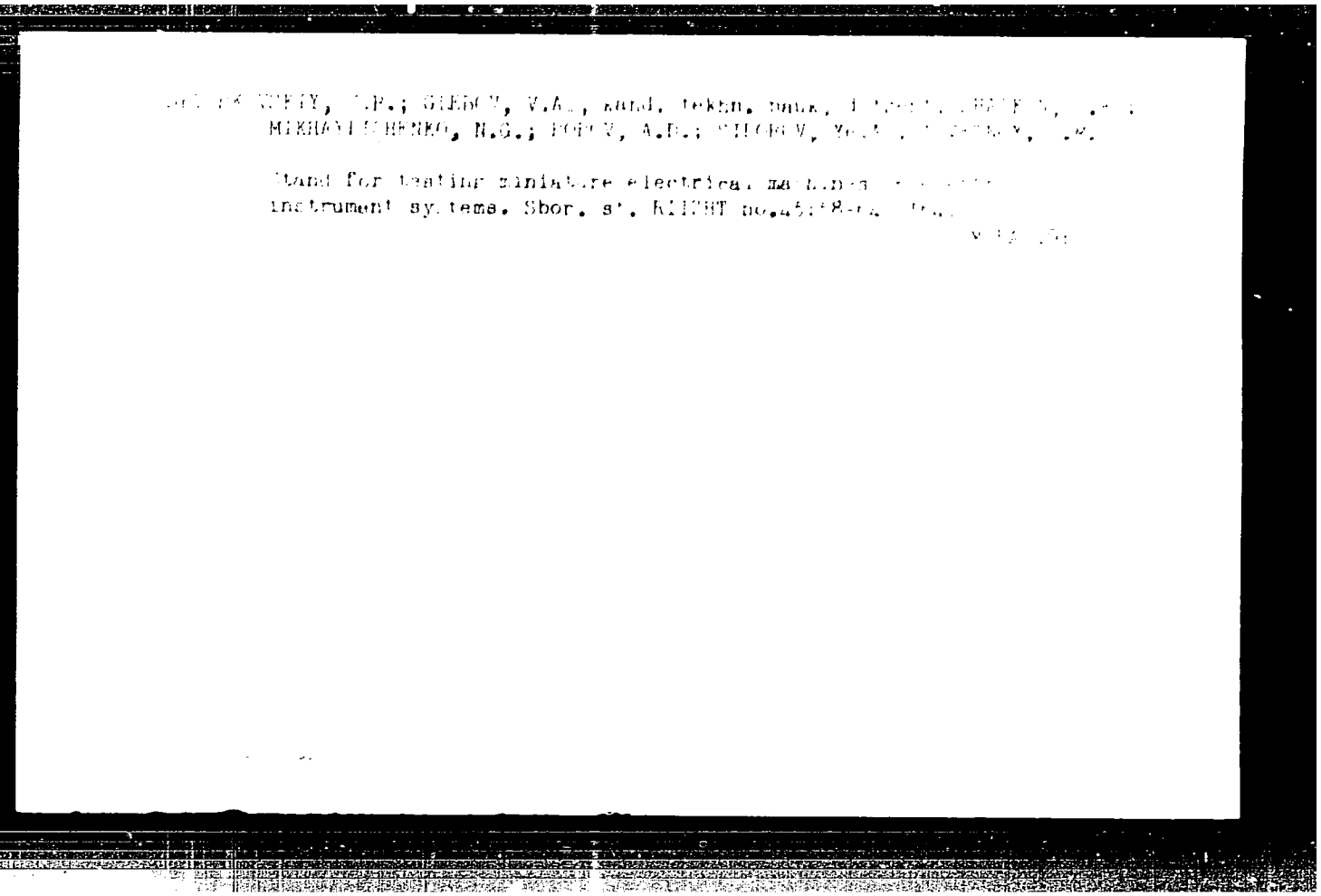
ASSOCIATION: Rostov-on-the-Don Institute of Railroad Transportation Engineers (Rostovskiy-na-Dony institut inzhenerov zheleznodorozhnogo transporta)

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2



POCHINOK, V.Ya.; BELINSKAYA, R.V.; SHEVCHENKO, O.I.; MIKHAYLICHENKO, N.K.

Thermal decomposition of fatty aromatic triazenes. Ukr. khim. zhur. 24 no. 2:228-231 '58. (MIRA 11:6)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko, Kafedra organicheskoy khimii.
(Triazene)

IVA[illegible]A, [illegible]; [illegible], I. [illegible]
L[illegible]EV, I. I.; KA[illegible], [illegible] A.;
KA[illegible]DY[illegible]A, [illegible]; MIKHAYLI[illegible];
[illegible]

Mycobacterium

[illegible]tudies of biologic[illegible] [illegible]
No. [illegible], 1[illegible]

9. Monthly List of Russian Accessions, Library of Congress, [illegible] 1953, Uncl.
2

MIKHAYLICHENKO, P. M.; GOL'DENBERG, I. Ia.; LUKASHOV, I. I.; KARUT, T. A.; IVANOVA,M.I.; KANDYBA, S. G.

"Pathogenic properties of the culture of tuberculous bacillus isolated from a field mouse."

SO: Veterinariia 29 (11), 1952, p. 20

MIKHAYLICHENKO, P.M., vetvrach.

Effect of prolonged use of horses for the production of therapeutic and prophylactic serums on the tonus of their cardiovascular system. Sbor. trud. Khar'. vet. inst. 22:208-217 '54. (MLRA 9:12)

1. Kafedra patologicheskoy fisiologii Khar'kovskogo veterinarnogo instituta.
(Horses--Physiology) (Serum) (Cardiovascular system--Diseases)

MIKHAYLICHENKO, P.M.

LUKASHOV, I.I., professor.; GOL'DENBERG, I.Ya., professor, [deceased].; IVANOVA, M.I., dotsent.; KARUT, T.A., dotsent.; MIKHAYLICHENKO, P.M., vrach.; KANDYBA, S.G., vrach.

Studying sheep and swine for the pathogenic properties of a culture grown from tuberculosis bacilli isolated from field voles. Sbor. trud. Khar'. vet. inst. 22:248-251 '54. (MLRA 9:12)

1. Kafedra epizootologii Khar'kovskogo veterinarnogo instituta i tuberkuleznyy otdel Khar'kovskogo instituta epidemiologii i mikrobiologii imeni I. I. Mechnikova.
(Tuberculosis in animals)

MIKHAYLICHENKO, P.V.

Trucks used for repairing contact networks. Elek. i tepl.tiaga 3 no.2:44 F '59. (MIRA 12:4)

1. Zamestitel' nachal'nika 1-go uchastka energosnabzheniya Ufimskoy dorogi.
(Motortrucks)
(Electric railroads--Wires and wiring--Maintenance and repair)

RAZIN, P.S., dotsent; FILIMONOVA, A.Ya.; VOTINOVA, Ye.P.;
MIKHAYLICHENKO, S.I. (Vladivostok)

Some problems in the pathogenesis of pneumonia in the Maritime Territory. Klin.med. no.4:43-45 '62. (MIRA 15:5)

1. Iz Vladivostokskogo meditsinskogo instituta (dir. - dotsent V.M. Zhivoderov).
(MARITIME TERRITORY--PNEUMONIA)

MIKHAYLICHENKO, V.

On a visit to Moscow Basin miners. Mast. ugl. 7 no. 6:23 Je '58.
(MIRA 11:7)

1. Predsedatel' Donskogo raykoma profsoyuza rabochikh ugol'noy promyshlennosti.
(Moscow Basin--Coal mines and mining)

MIKHAYLICHENKO, V.A. (adres: Stalino, Donbass, 9-ya liniya, 167, kv. 45)

Ossifying angiofibroma of the lung. Vest.khir. 74 no.3:74-75 Ap-My '54. (MLRA 7:6)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav.prof. K.T. Ovnatanyan) Stalinskogo meditsinskogo instituta im. A.M.Gor'kogo.

(LUNGS, neoplasms,
*angioma, sclerosing)
(ANGIOMA, SCLEROSING,
*lungs)

MIKHAYLICHENKO, V.A., Cand Ved Sci -- (diss) "Comparative evaluation of certain methods of treating the stump of the large and small intestines in resections. (Experimental study)," Stalino, 1957, 11 pp (Stalino State Med Inst im A.V. Gor'kiy) 120 copies (KL, 26-58, 116)

MIKHAYLICHENKO, V.A. (Stalino, Donbass)

Tumor of the adrenal cortex. Probl. endokr. i gorm. 4 no.5:118-120 S-O '58. (MIRA 11:12)

1. Iz Kliniki obshchey khirurgii (Zav. - prof. A.I. Charugin) Stalinskogo meditsinskogo instituta (dir. A.M. Ganichkin).
(ADRENAL CORTEX, neoplasms
adenoma, case report (Rus))

MIKHAYLICHENKO, V.A.

Work of the Stalino Province Society of Surgeons in 1959. Nov. khir. arkh. no.3:119 My-Je '60. (MIRA 15:2)
(DONETSK PROVINCE--SURGICAL SOCIETIES)

MIKHAYLICHENKO, V.A.

Case of fibroadenoma of the kidney. Urologiia 25 no. 4:53-54 Jl-Ag '60. (MIRA 14:1)

(KIDNEYS—TUMORS)

MIKHAYLICHENKO, V.A., kand.med.nauk

Structure of the pancreatic ducts. Klin.khir. no.8:52-55 Jl '62.
(MIRA 15:11)

1. Kafedra obshchey khirurgii (zav. - prof. A.I.Charugin) lechebnogo fakul'teta Donetskogo meditsinskogo instituta.
(PANCREAS)

MIKHAYLICHENKO, V.A.; BELETSKIY, V.I.

Lymphogranulomatosis of the duodenum; a case report. Vop. onk. 10 no.9:106-109 '64. (MIRA 18:4)

1. Iz kafedry obshchey khirurgii lechebnogo fakul'teta (zav. - prof. A.M.Ganichkin) i kafedry rentgenologii (zav. - dotsent I.A.Kunin) Donetskogo meditsinskogo instituta.

MIKHAYLICHENKO, V.A. (Donetsk, 66, ul. Artema, d.127, kv.53)

Cancer of the greater duodenal papilla. Vop. onk. 10 no.5: 94-99 '64. (MIRA 18:2)

1. Iz kafedry obshchey khirurgii lechebnogo fakul'teta (zav. - prof. A.M.Ganichkin) Donetskogo meditsinskogo instituta.

MIKHAYLICHENKO, V.N.

Solonetz complexes in the Ubagan-Ishim interfluve. Trudy Inst. pochv. AN Kazakh. SSR 15:126-161 '63. (MIRA 16:12)

MIKHAYLICHENKO, V. N., Cand Agr Sci -- "Improving the solonetzes ~~soils~~ of virgin ~~lands~~, ~~according to~~ the example ~~set by~~ solonets complexes of Ucagano-Ishim watershed." Alma-Ata, 1961. (Acad Sci UzSSR. Inst of ~~Agr~~) (KL, 3-61, 254)

MIKHAYLIDI, L.L.; GORYACHEVA, I.M.

Drying sulfate in a "fluidized" bed. Bum. prom. 36 no.11:17-18 N '61. (MIRA 15:1)

1. Sverdlovskiy sovnarkhoz.
(Sulfates--Drying)

MIKHAYLIK, A. D.

PA 45/49T47

USSR/Engineering Apr 49
Fuel
Coal

"Specific Weight of Several Coals of the Donets Basin," A. A. Agroskin, A. D. Mikhaylik, R. N. Pitin, V. S. Sapronov, Power Eng Inst imeni G. M. Krzhizhanovskiy, Acad Sci USSR, 6 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 4

Trend toward increased loading of coking furnaces has made it important to increase specific weight of coal charges. Method of moistening coal charges with micro additions of hydrocarbon liquids 45/49T47

USSR/Engineering (Contd) Apr 49

is widely used for this purpose. This method is very effective in increasing specific weight of Donets Basin coals. Gives characteristics of five types of Donets Basin coals -- PZh-1, PZh-2, K, PS-1, and PS-2. Graphs show variation of specific weight with (1) addition of kerosene and (2) moisture. Submitted by Acad N. P. Chizhevskiy, 27 Jul 48.

45/49T47

14-57-7-15353

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 180 (USSR)

AUTHOR: Mikhaylik, A. F.

TITLE: History of Growth and Planning of Khar'kov (Do istoriyi zabudovy ta planirovky m. Kharkova -- in Ukrainian)

PERIODICAL: Nauk. pratsi, Kharkivsʹk. in-t inzh. komun. budivnytstva, 1956, Nr 7, pp 121-133

ABSTRACT: Bibliographic entry

Card 1/1

MIKHAYLIK, Aleksey Isaakovich, dotsent; MIKHAYEVICH, N.A., red.; SHEVCHENKO, M.G., tekhn.red.

[Kharkov is 300 years old; a brief account of its history and economy]. Khar'kovu 300 let; kratkii istoriko-ekonomicheskii ocherk. Khar'kovskoe obl. izd-vo, 1958. 157 p. (MIRA 12:2)
(Kharkov--Description)

ASTRAKHOV, V.I., dotsent, kandidat istoricheskikh nauk; MIKHAYLIK, A.F., dotsent; SHCHERBININ, I.F., redaktor; ZAMAKHOVSKIY, L.S., tekhnicheskiy redaktor

[Kharkov; a reference book] Khar'kov; spravochnaia kniga. [Khar'kov] Khar'kovskoe obl.izd-vo, 1957. 603 p. (MLRA 10:8)
(Kharkov--Directories)

KONDRAT'YEV, Nikolay Fedorovich; MIKHAYLIK, Aleksey Fedoseyevich; DONSKOY, Ya.Ye., red.; LIMANOVA, M.I., tekhn. red.

[Kharkov in the seven-year plan] Khar'kov v semiletke. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1961. 112 p. (MIRA 15:1)
(Kharkov—Economic policy)

MIKHAYLIK, A. G. (Novokuznetsk)

Use of a generator on the track relocation machine. Put' i put. khoz. 6 no.10:10-11 '62. (MIRA 15:10)

(Railroads—Equipment and supplies)

MIKHAYLIK, A.G.

Snow removing machine with brushes. Put' i put.khoz. 7 no.3:38 '63. (MIRA 16:10)

1. Nachal'nik uchastka mekhanizatsii zheleznodorozhnogo tsekha Kuznetskogo metallurgicheskogo kombinata, Kuznetsk.

MIKH...V, ..., inzh. (Novokuznetsk)

Pr... of the workers of the ... of the K... Metallurgical Combine. Put' i put.khoz. 8 no.... '6...

MIRA 18...

MIKHAYLIK G M.

USSR (600)

Sugar Industry

Role of the senior standardizing engineer in production. Sakh. prom. 26 no. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

MIKHAYLIK, G.M.

Automatic control of production. Sakh.prom. 27 no.7:34-37 Jl '53.
(MLRA 6:6)

1. Poltavskiy sakhsveklotrest. (Automatic control) (Sugar machinery)

MIKHAYLIK, I.

Centralized interurban haul service in Moldavia. Avt. transp. 38 no.8:10 Ag '60. (MIRA 13:8)
(Moldavia--Transportation, Automotive)

1. MIKHAYLIK, P., ENG.

2. USSR (600)

4. Barrels

7. Efficient barrel productions. Mol.prom. 12 no. 12, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

25(2)

AUTHOR: Mikhaylik I.I., Engineer

TITLE: A Semi-Automat for Deburring the Butt Faces of Threading Dies.

PERIODICAL: Mashinostroitel', 1959, Nr 4, p 26 (USSR)

ABSTRACT: The subject semi-automat was developed by Chief Designer I.F. Gontarevskiy of the Technical Department of the L'vovskiy instrumental'nyy zavod (L'vov Tool Plant) from an obsolete small horizontal milling machine. It has two work discs rotating in the opposite sense with different velocity and deburring-cutting segments of high-speed steel "R-18", one feed disc and an inclined chute for feeding the dies to the cutting segments. One of the work segments is rigidly attached to a mandrel for the dies and the other is mounted on thrust roller bearings. The semi-automat released two lathes and four workers employed

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25(2) SOV/117-59-4-11/33

A Semi-Automat for Deburring the Butt Faces of Threading Dies.

for the job. eliminated the use of emery cloth and undercutting tools, removed the injury hazard, improved the quality of the dies, raised the work output, and cut the production costs. The designer is now developing a bunker to the machine to make it fully automatic. There is 1 diagram.

Card 2/2

25(7) SOV/ [illegible] 3/33

AUTHOR: Mikhaylik, P.I., Engineer

TITLE: An Attachment for Resharpening Punches of Complex Dies Without Dismantling

PERIODICAL: Mashinostroitel', 1959, Nr 6, p 33 (USSR)

ABSTRACT: The attachment is designed for use on the table of a surface grinder and permits the resharpening of worn-off punch parts without dismantling the punch of complex press dies. The introduction of the attachment has permitted the resharpening of punches directly in the stamping press shop. There is 1 drawing.

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25(SOV/117-59-8-36/44

AUTHOR: Mikhaylik, P.I., Engineer

TITLE: A Bench for Making Shell Molds

PERIODICAL: Mashinostroitel', 1959, Nr 8, pp 42-43 (USSR)

ABSTRACT: This bench, designed by the tool shop superintendent of the L'vovskiy armaturnyy zavod (L'vov Fittings Plant) accomodates two molding boards with electric spirals heating them to 200 to 250°C. The boards are mounted on trunnions, and can be turned. Hoppers with the bakelite mix are placed on hand-controlled lifting devices under the boards. The hot board, wetted-down with the separating liquid, is turned by a lifting device. The hopper is moved to it, attached by spring latches, and then the board is moved into the initial position and held hot for 15 to 20 seconds to let the shell form on the pattern. After this, the board is turned again, the hopper with the remaining mix is detached,

Card 1/2

A Bench for Making Shell Molds

and the board with the shell on the patterns is brought into the upper position, covered with an electric hood heating the shell to 350 to 400°, and left to bake for 1 to 1.5 minutes. A signal lamp on the control board shows when the baking period ends. The electric hood is then placed over the pattern on the other board, while the ready shell is removed from the first. There is 1 diagram.

PALIY, Georgiy Yakovlevich, polkovnik v otstavke; SOKOLOV, V.D., podpolkovnik, red.; MIKHAYLIK, V.F., kapitan, red.

[The Sixth Heroic Battery] Shestaia geroicheskaia. Moskva, Voenizdat, 1964. 89 p. (MIRA 18:3)

ACCESSION NR: AR3000176 S/0274/63/000/004/A067/A068

SOURCE: RZh: Radiotekhnika i elektrosvyaz', Abs. 4A427

AUTHOR: Kukush, V. D.; Mikhaylik, V. T.; Orlov, V. G.

TITLE: Increasing the sensitivity of a ponderomotive wattmeter by means of a waveguide circuit of a traveling-wave resonator

CITED SOURCE: Uch. zap. Khar'kovsk. un.-t. Tr. Radiofiz. fak., v. 121, no. 5, 1962, 126-138

TOPIC TAGS: ponderomotive PIM-10 Wattmeter; traveling-wave resonator; sensitivity increase

TRANSLATION: The wattmeter is included in the loop of traveling-wave resonator (R) connected with the principal channel over which the metered supershighfrequency power is transmitted. Maximum increase of sensitivity depends only on losses in R, and can be made sufficiently great.

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ACCESSION NR: AR3000176

However, the presence of loss-free inhomogeneity in R, consisting of the movable portion of the wattmeter, disrupts the required phase correlations and lowers the gained increase in sensitivity. The experiments were conducted in the 3 cm range, using: ponderomotive PIM-10 wattmeter; adjustable trombone-type phase inverter, included in R for its tuning; a directional coupler, with transient attenuation of 5.5-8.9 decibels and directivity of 15-20 decibels, constituting a part of R. Maximum increase of sensitivity was 3.6 times. It is believed that sensitivity increase can be raised to 10 times. R. M.

DATE ACQ: 16May63 ENCL: 00 SUB CODE: 00

Card 2/2

30V/137-59-5-9908

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 65 (USSR)

AUTHOR: Mikhaylikov, S.V.

TITLE: Chromium and Phosphorus Oxidation in the Reduction of Natural-Alloyed Chrome Cast Irons

PERIODICAL: Tr. In-ta metallurgii Ural'skiy fil. AS USSR, 1958, Nr 2, pp 73 - 79

ABSTRACT: The author determined the conditions of metal dephosphorization by blowing with simultaneous preservation of Cr. If high-basicity synthetic slags were used (the composition of the slag-forming mixture contained from 55 to 100% lime or limestone with addition of scale or fluorspar) it was possible to reduce [P] down to 0.06 - 0.08% during the blowing-through process in a 7 kg induction furnace and to preserve up to 75% of the initial Cr content. Amounts up to 0.4 - 1% Cr were preserved during the blow tests of cast iron, carried out in a 30-t converter with addition of fluorspar; P was reduced to 0.05%.

Card 1/1

B.L.

AUTHORS: Sorokin, F.Ya., Mikhaylikov, S.V. 32-3-21/52

TITLE: Continuous Measuring of Metal Temperatures in Laboratory Induction Furnaces (Nepreryvnyy zamer temperatur metalla v laboratornykh induktsionnykh pechakh)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 3, pp. 311-312 (USSR)

ABSTRACT: An induction furnace with a holding capacity of 7 kg metal melt and with a thermocouple element (consisting of a tungsten-molybdenum-couple) is described. The thermocouple element is provided with a protective top made of a material based upon zirconium oxide, which protrudes through the bottom of the furnace, which is made of magnesite, into the melt. A schematical drawing of the furnace as well as several graphs showing temperature modifications during continuous measurement are given. Temperature measurements carried out at 1600° C with a platinum-, latinum-rhodium couple agreed with measurements carried out simultaneously with the tungsten-molybdenum couple. The zirconium-oxide top did not change in the course of measurements, so that a mechanical destruction need not be feared except as a result of carelessness. There are 4

Card 1/2

Continuous Measuring of Metal Temperatures in Laboratory Induction Furnaces 32-3-21/52

figures.

ASSOCIATION: Institute for Metallurgy of the Ural Branch AS USSR (Institut metallurgii Ural'skogo filiala Akademii nauk SSSR)

AVAILABLE: Library of Congress

1. Induction heating 2. Metals-Temperature factors
3. Thermocouples-Applications

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4601

Koordinatnoye soveshchaniye po primeneniyu kisloroda na metallurgicheskikh zavodakh Urala. Sverdlovsk, 1956

Primeneniye kisloroda na metallurgicheskikh predpriyatiyakh Urala; materialy koordinatsionnogo soveshchaniya (Use of Oxygen in Metallurgical Plants of the Urals; Materials of the Coordination Conference) Sverdlovsk, 1960. 152 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Ural'skiy filial. Institut metallurgii; Ural'skiye pravleniya nauchno-tekhnicheskikh obshchestv chernoy i tsvetnoy metallurgii.

Resp. Ed.: P.S. Kusakin, Candidate of Technical Sciences; Tech. Ed.: N.F. Seredkina.

PURPOSE: This collection of papers is intended for scientific research and technical personnel in the field of metallurgy.

COVERAGE: The use of oxygen in ferrous and nonferrous metallurgy of the Urals is discussed. Results of experimental use of oxygen in some metallurgical plants are presented. During the Conference, held December 20 and 21, 1956, the following persons (in addition to the authors) took part in the discussion: V.Ya. Miller, V.V. Mikhaylov, P.Ya. Sorokin, A.A. Perestoronin (all affiliated with the Institute of Metallurgy of the Ural Branch AS USSR), S.M. Kazachenko (Nizhne-Saldinskiy metallurgicheskiy zavod - Nizhnyaya-Salda Metallurgical Plant), N.F. Kochin (Deceased) (Ural'skiy institut chernykh metallov - Ural Institute of Ferrous Metals), M.Ye. Kialitsin (Chelyabinskiy metallurgicheskiy zavod - Chelyabinsk Metallurgical Plant), G.V. Demin (Krasnoural'skiy medeplavil'nyy zavod - Krasnoural'sk Copper Smelting Plant), V.A. Aglitskiy (Institut Unipromed' - "Unipromed'" Institute). Some of the papers are followed by references, both Soviet and non-Soviet.

Novolodskiy, P.I. [Nizhniy Tagil Metallurgical Combine]. Experimental Use of Oxygen in Open-Hearth Furnaces 43

Khudyakov, E.A. [Ural Scientific Research Institute of Ferrous Metals]. Use of Oxygen in Open Hearth Furnaces 57

Mikhaylikov, S.V., and V.E. Kryzov [Institute of Metallurgy of the Ural Branch of the Academy of Sciences USSR, Uralvagonzavod (Ural Railroad Car Plant)]. Experimental Use of Oxygen in the "Uralvagonzavod" Plant 65

Rybakov, L.S. [Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (Ural Polytechnic Institute imeni S.M. Kirov)]. Some Characteristic Features of Slag-Handling Technique in Steel Making With the Use of Oxygen 75

Krasovskiy, S.A. [Nizhne-Tagil'skiy filial Uralgipromeza (Nizhniy Tagil Branch of the Ural State Institute for the Design and Planning of Metallurgical Plants)]. Steel Making in Converters With the Use of Oxygen 87

Malikov, K.Ya. [Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki (All-Union Scientific Research Institute of Metallurgical Heat Engineering)]. Operation of Gas Generators in the [Severskiy] Open-Hearth Plant, Using Oxygen-Enriched Blast 97

The following cooperated in this investigation: A.M. Polzunov, A.V. Demidovich, L.L. Tarkhan, N.D. Zimina, all staff members of the Severskiy Metallurgical Plant, and G.N. Suntsov, V.V. Ashpur, A.F. Moiseyeva, A.A. Kanova, V.G. Karavayeva, and Z.I. Bobyleva, all staff members of the Institute.

Demidovich, A.V. [Severskiy metallurgicheskiy zavod (Severskiy Metallurgical Plant)]. On the Effectiveness of Supplying Oxygen to Open-Hearth Furnace Ports and to Gas Generators 103

Smirnov, V.I. [Ural Polytechnical Institute imeni S.M. Kirov]. Experimental Use of Oxygen in Ferrous Metallurgy 107

Charnak, L.L. [Yuzhno-Ural'skiy nikelevyy kombinat (South-Ural Nickel Combine)]. Shaft-Furnace Smelting of Oxidized Nickel Ores With Oxygen-Enriched Blast 111

Diyev, N.P. (deceased), I.I. Paduchev, S.A. Yermakov, and V.I. Toporova [Institute of Metallurgy of the Ural Branch of the Academy of Sciences USSR]. Use of Oxygen in the Copper Industry 117

Lochner, M.L., N.P. Diyev, I.M. Rafalovich, S.I. Bakitin, F.D. Yegurov, and G.S. Il'fand. Fire Refining of Copper With the Use of Oxygen-Enriched Air 129

Discussions 135

Resolution 150

MIKHAYLIKOV, S.V.

MIKHAYLIKOV, S.V.; MIKHAYLOV, V.V.

Investigating the feasibility of retaining chromium in steel during the blowing of naturally alloyed chromium cast iron. Trudy Inst.met.UFAN SSSR no.5:21-39 '60. (MIRA 13:8)
(Chromium steel--Metallurgy)

REVEBTSOV, V.P.; MIKHAYLIKOV, S.V.; KAMYSHEV, V.M.

Oxygen blowing of low-phosphorus cast iron in a one-ton rotary furnace. Izv.vys.ucheb.zav.; chern.met. no.7:42-48 '60. (MIRA 13:8)

1. Institut metallurgii Ural'skogo filiala AN SSSR.
(Rotary-hearth furnaces) (Oxygen--Industrial application)

S/148/60/000/009/004/025
A161/A030

AUTHORS: Mikhaylikov, S.V., and Revebtsov, V.P.

TITLE: The behaviour of vanadium in blasting with different intensity of oxidation and metal temperature

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 9, 1960, 29-34

TEXT: The best method of producing steel from vanadium which contains pig iron, from the economical point of view, is blasting in converters and obtaining a semi-product for open-hearth furnaces and slag for production of ferrovanadium. Many aspects of the behaviour of vanadium in converter process have been considered, but additional investigations are important in view of the vanadium content in the ore of Kachkanar deposit that will soon be used, and the new processes must be considered (converter process with oxygen blast from top, Kaldo process, rotary process). The basic part of investigation has been carried out in the laboratory, in a 30 kw induction furnace, with 4 kg charge of synthetic preliminarily melted vanadium cast iron, in temperatures up to 1780°C. Most of the heats had initial iron

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temperatures of 1400 to 1500°C. It had been revealed in many studies and confirmed in practice that oxidation of vanadium is intensive in the first minutes of blasting at a low initial temperature of iron and low process temperature, but with a higher initial temperature (1450-1500°) the reaction is inhibited. The cause is not the metal temperature but the intensity of blasting (Fig.1), and oxygen has a stronger effect than air. Besides this, pure oxygen has a stronger effect than an equivalent oxygen volume in blast with air. The effect of blast intensity in an acid furnace is drastic (Fig.4); in experiments with air blast with 50-56 liter/min air the residual vanadium content was drastically decreased, and the volume of oxygen proved sufficient for oxidation of the silicon as well. The vanadium distribution curve at an air blast of 50 liter/min shows that the major factor preventing the oxydation of vanadium in the acid furnace is the higher silicon content in metal that increases during the heat with a low feed of oxygen. As soon as oxidization became intensive and silicon could burn, vanadium started oxidizing with a rate not lower than that in the basic furnace. The results of experiments match the results of industry heats in converters with a bottom and side blast. Experiments with a 20 kg arc furnace also

confirmed the observations. It may be stated that vanadium can be extracted into slag rapidly and completely through intensive interaction of metal with slag and strongly oxidizing gas This assumption proved right in experiments with a 1 ton rotary furnace (Detailed information on these experiments with a rotary furnace will be published later). Silicon, manganese, vanadium and chrome burned out down to hundredths of one per cent still having a high carbon content; vanadium oxidized fairly fully despite temperature higher than optimum for devanadation in the second heat half; the decarbonization reaction was also intense. Experiments in industry furnaces are yet necessary. Conversion of vanadium pig iron in rotary furnaces directly into steel, or into a low-carbon semi-product with slag suitable for chemical conversion could be tried. The following basic conclusions can be made: 1) The intensity of blast is the determining factor in the behaviour of vanadium; 2) The devanadation process at high temperatures is possible when the air blast is replaced by oxygen; 3) Devanadation progresses well in rotary furnaces with oxygen blast. There are 4 figures and 6 Soviet-bloc references.

The behaviour of vanadium ...

ASSOCIATION: Institut metallurgii Ural'skogo filiala AN SSSR (Institute of Metallurgy of the Ural Branch of the Academy of Sciences of the USSR)

SUBMITTED: 19 March 1960

Card 4/6

S/148/60/000/009/004/025
A161/A030

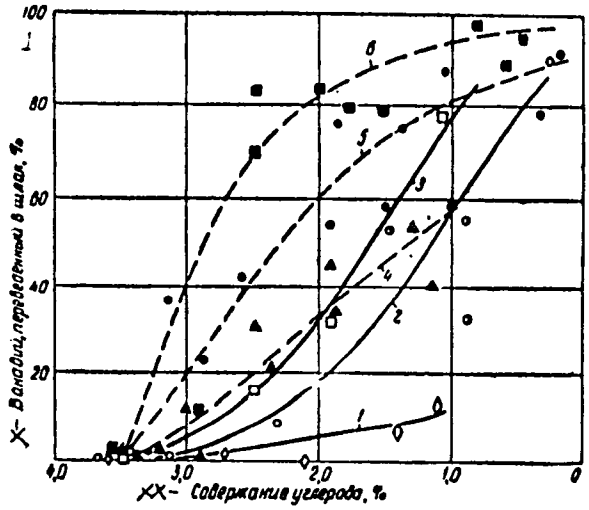

Fig. 1 - The effect of blast volume on oxidization of vanadium in basic furnace; (———) - air; (-----) - oxygen. 1) 4-6.5 liter/min; 2) 29-35 liter/min; 3) 48 liter/min; 4) 4-4.35 liter/min; 5) 8.9 - 9.3 liter/min; 6) 11.2 - 34.7 liter/min; x - % vanadium brought into slag; xx - carbon content, %

Card 5/6

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A161/A030

4

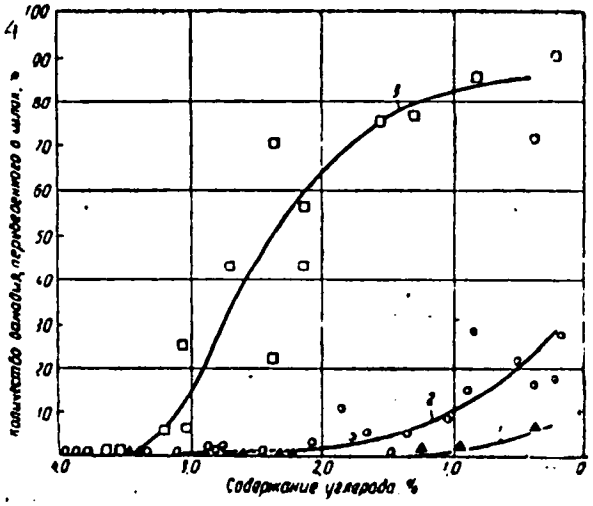

Fig. 4 - The effect of blast volume on oxidization of vanadium with an air blast in the acid furnace:
1) 7.2 - 7.3 liter/min;
2) 30 - 42 liter/min;
3) 50.2 - 56.4 liter/min

Card 6/6

L 15583-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3000904 S/0279/63/000/002/0033/0039

AUTHORS: Yershov, G. S.; Mikhaylikov, S. V. (Sverdlovsk) 53

TITLE: Investigation of the possibility of steel refining by means of synthetic slags

SOURCE: AN SSSR. Izv. otd. tekh. nauk. Metallurgiya i gornoye delo, no. 2, 1963, 33-39

TOPIC TAGS: steel, refining, slag, synthetic slag, blast furnace slag, nepheline, desulfuration

ABSTRACT: The investigation deals with the refining of steel by means of synthetic slags with a high silica content, of blast furnace slag, and of nepheline-based synthetic slags. The steel was prepared from a batch of Armco-iron heated to 1650C, with the aftercharge added before the discharge. The slags were prepared in a resistance furnace either from pure components or from metallurgical slags supplemented with lime and alumina. From 6 to 7% of the resulting slag, heated to 1700C, was added to the steel in the ladle at 1000C. It was found that a silica content up to 21% in the synthetic slag did not adversely affect the desulfuration of steel, while an increase in ferrous oxide in the slag from 2.60%

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L 15583-63

ACCESSION NR: AP3000904

to 4.50% caused the sulfur to decrease by 35% to 12% of the original amount. Tests conducted with blast furnace slag resulted in a 21% increase in the steel sulfur content. The performance of this slag was improved after a preliminary purification by oxygen. It was also found that treatment of the steel with CaO-Al_2O_3-SiO_2 slags resulted in a marked reduction of nonmetallic inclusions. The effectiveness of the slags in this respect was favorably influenced by their TiO_2 content. The use of nepheline as a slag reduced the nonmetallic inclusions of the steel from the original 0.058% to 0.009%. Orig. art. has: 6 formulas and 3 tables.

ASSOCIATION: none

SUBMITTED: 18Oct62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: ML NO REF SOV: 009 OTHER: 001

Card 2/2

MIKHAYLIKOV, S.V. (Sverdlovsk); SHTENGEL'MEYER, S.V. (Sverdlovsk); YERSHOV, G.S. (Sverdlovsk)

Effect of silica on the viscosity of lime-silica slags. Izv. AN SSSR. Met. i gor. delo no.1:48-50 Ja-F '64. (MIRA 17:4)

LUPEYKO, V.M.; YERSHOV, G.S.; UMRIKHIN, P.V.; MIKHAYLIKOV, S.V.

Improving the method of metal refining by synthetic slags.
Izv. vys. ucheb. zav.; chern. met. 7 no.3:57-65 '64.
(MIRA 17:4)

1. Ural'skiy politekhnicheskiy institut.

L 35596-65 EPF(c)/EPR/EWG(j)/EWT(m)/EWP(b)/EWP(t) Pr-4/Ps-4 IJP(c) JD

ACCESSION NR: AR5005854 S/0137/64/000/011/V055/V055

SOURCE: Ref. zh. Metallurgiya, Abs. 11V338

31
B+1

AUTHOR: Yershov, G. S.; Mikhaylikov, S. V.

TITLE: Purification of steel from nonmetallic inclusions by treating it with liquid synthetic slags of various compositions

CITED SOURCE: Tr. 1-y Sverdl. nauchno-tekhn. konferentsii molodykh uchenykh. Ch. 1. Sverdlovsk, 1964, 67-72

TOPIC TAGS: steel degasification, metal purification, nonmetallic inclusion, ladle, synthetic slag

TRANSLATION: The possibility of purifying gear steel from nonmetallic inclusions by treating it in the ladle with synthetic slags has been investigated. In the first group of melts, the steel was treated in the ladle with slag melts of the system CaO-Al_2O_3-SiO_2. In this case, a significant lowering of the total amount of nonmetallic inclusions occurred. In the second group of melts, the steel was treated with a tagilite blast furnace slag with small additions of CaO and Al_2O_3.

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L 35596-65

ACCESSION NR: AR5005854

In this variation, the amount of nonmetallic inclusions decreased from 0.027-0.022% to 0.014-0.003%. In the third group of melts, the steel was treated with synthetic slags containing TiO_2. With a TiO_2 content of 6.27% in the synthetic slag, the amount of nonmetallic inclusions in the steel decreased from 0.024 to 0.003%, while with treatment with a synthetic slag containing 2.40% TiO_2, the amount of nonmetallic inclusions decreased from 0.031 to 0.014%. In the fourth group of melts, the steel was treated with a nepheline melt with and without additions of CaO and Al_2O_3. In this case, a significant decrease in the nonmetallic inclusions was observed. Thus, with Na_2O contents in the synthetic slag of 9.64, 6.0, and 4.0%, the amount of nonmetallic inclusions in the steel treated with these melts decreased respectively by 6.5, 5.1, and 4.2 times. 2 tables, 7 literature titles. G. Lyubimova.

SUB CODE: MM ENCL: 00

Card 2/2

MIKHAYLIN, A. D., Cand of Chem Sci -- (diss) "Study of the mechanism of the deoxidation of calcium phosphate with carbon and the use of tracer atoms." Moscow, 1957, 17 pp (Scientific Institute of Fertilizers and Insectofungicides im Prof Ya. V. Samoylov), 110 copies (KL, 33-57, 87)

SOV/20-120 2-44/63

AUTHORS: Postnikov, N. N., Mikhaylin, A. D.

TITLE: An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32} (Issledovaniye diffuzii v sisteme trikal'tsiyfosfat - okis' kal'tsiya - uglerod s pomoshch'yu radioaktivnykh izotopov C^{14}, Ca^{45} i P^{32})

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 120, Nr 2, pp.378-380 (USSR)

ABSTRACT: In the investigation of the reduction mechanism and the kinetics of tricalcium phosphate by carbon the first author (Ref 1) set up the hypothesis that the velocity of process is limited by a mutual diffusion of reagents through the layer of reaction products (calcium oxide). At first the diffusion was investigated in the C - CaO system. Radioactive carbon was produced as soot by reduction of radioactive CO_2 by means of magnesium metal at 700°C. A second type of soot from acetylene and radioactive CO_2 did not show any great differences as compared to the former. Both consisted of

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An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32}

β-graphite (Table 1). Radioactive CaO was produced by annealing of Ca^{45} containing calcium carbonate. The dependence of the integral activity of the sample on the total thickness of the remote layers is to be seen in figure 1 as curve $I = f(x)$. From the diagram the activity values were determined and from them the difference $I_n - I_{n+1}$. Based on this difference the dependence of the change of activity on the depth of diffusion was constructed in coordinates $\ln (\Delta I \cdot \mu I) = -(x^2)$ (Figure 2, 2). The values of the diffusion coefficient at different temperatures are shown in table 2 and figures 3, 4. The diffusion in the system $Ca_3(PO_4)_2$ - CaO: The determination of the diffusion of such a large tetrahedral ion as PO_4^{3-} is especially interesting for the investigation of the reduction of tricalcium phosphate. Tricalcium phosphate (radioactive phosphate) and chemically pure CaO were used as initial substances for this purpose. The method of production is described. From the obtained results the conclusion can be drawn that the sublimation process of phosphorus on the whole takes place in the solid phase and is limited by the velocity of the mutual diffusion. Therefore it is expedient to use a briquetted charge in the phosphorus sublimation in electric

SOV/ 2o-12o-2-44/63

An Investigation of Diffusion in the System Tricalcium Phosphate - Calcium Oxide - Carbon by Means of the Radioactive Isotopes C^{14}, Ca^{45} and P^{32}

furnaces, which offers a possibility to intensify the process on a reduction of temperature in the furnace tank. There are 3 figures, 2 tables, and ' Soviet references.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungisidam im. Ya. V. Samoylova
(Scientific Institute for Fertilizers and Insecticides imeni Ya. V. Samoylov)

PRESENTED: December 31, 1957, by S. I. Vol'fkovich, Member, Academy of Sciences, USSR

SUBMITTED: December 28, 1957

1. Calcium oxide-calcium phosphate-carbon systems--Diffusion 2. Calcium isotopes(Radioactive)--Applications 3. Phosphorus isotopes(Radioactives)--Applications 4. Carbon isotopes (Radioactive)--Applications

Card 3/3

S/186/60/002/002/018/022
E071/E433

21.4100

AUTHORS: Mikhaylin, A.D. and Postnikov, N.N.

TITLE: The preparation of marked carbon ^{14} from radioactive carbon dioxide

PERIODICAL: Radiokhimiya, 1960, Vol.2, No.2, pp.246-248

TEXT: A method of preparation of radioactive carbon from radioactive carbon dioxide in the form of carbon black similar in reducing properties to that prepared from acetylene is described. The method is based on the reduction of carbon dioxide with magnesium. The vessel in which the reduction is carried out is a cylindrical thick-walled flask made from molybdenum glass, closed with a stopper through which two copper electrodes are passed. A molybdenum spiral was fixed to the ends of the electrodes. It was covered with magnesium filings supported in the vessel by a quartz grid. Two such vessels were used in the experiments. After blowing through with pure carbon dioxide for 1 hour, the vessels were evacuated to 10^{-6} to 10^{-7} mm Hg and the first vessel was filled with radioactive carbon dioxide to a pressure of 740 to 760 mm Hg and an electric current (15 A) was passed through

the spiral. As soon as the magnesium began to burn, the current was reduced to about 2 - 3 A and increased again as the intensity of combustion decreased until the combustion stopped. After cooling, the pressure in the vessel indicated the amount of the carbon dioxide reacted. The remaining carbon dioxide was passed into the second vessel for the continuation of the reduction process and the first vessel was again filled with fresh carbon dioxide. At the end of the process the reduction products were washed out from the reaction vessel, evaporated to a 100 ml volume and treated with 50 ml of concentrated hydrochloric acid in order to dissolve admixtures (magnesium and molybdenum oxides, residual magnesium, carbides). The carbon suspension was filtered, washed, dried and ignited at 1000°C in a stream of well purified nitrogen for 4 hours. The yield of ignited carbon was 88% (98.76% C). X-ray and electron microscopic investigations indicated that it was in the form of β-graphite of a crystal size of 10^{-5} to 10^{-6} and that the micro-structure was similar to that of carbon black obtained from acetylene. The reducing ability of the radioactive carbon black was found to be identical to that obtained from acetylene (based on

24398

S/186/60/002/002/018/022
E071/E433

The preparation of marked carbon .. the reduction of chemically pure tricalcium phosphate). There are 2 figures.

SUBMITTED: June 24, 1959

Card 3/3

L 17191-63 EWP(q)/EWT(m)/BDS AFFTC JD
ACCESSION NR: AR3004189 S/0081/63/000/009/0423/0423

57

SOURCE: RZh. Khimiya, Abs. 9L67

AUTHOR: Talanov, N.D.; Mikhaylin, A.D.; Yezhova, A.M.; Livshits, S.I.; Loktyukhina, T.A.

TITLE: Production of high-purity phosphorus

CITED SOURCE: Tr. po khimii i khim. tekhnol., (Gor'kiy), vy*p. 1, 1962, 159-164

TOPIC TAGS: red phosphorus, yellow phosphorus, purity, vacuum distillation, phorphorus

TRANSLATION: The process of purification of technical commercial red phosphorus from impurities of mineral acids in small concentrations was studied. The non-equivalent action of 3 and 5% HNO_3, H_2SO_4, and HCl or their mixtures, taken in equal amounts, was demonstrated at 70-95°. Two treatments of red phosphorus with acid for periods of 12 hours, followed by washing with distilled water and drying, successfully purify phosphorus from a total content of the impurities to be determined up to $2 \cdot 10^{-2}$-$5 \cdot 10^{-3}$%. The process of vacuum distillation of

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L 17191-63
ACCESSION NR: AR3004189

technical yellow phosphorus, preliminarily purified of acid, in glass apparatus at a residual pressure of $1 \cdot 10^{-2}$-$1 \cdot 10^{-4}$ mm of mercury, followed by its polymerization to the red modification was studied. Phosphorus containing a sum of the impurities to be determined equal to $5 \cdot 10^{-4}$% and lower is obtained by the method of two to three distillations. Spectrally pure phosphorus is obtained by the method of four distillations. No influence of the depth of the vacuum in the range $1 \cdot 10^{-2}$-$1 \cdot 10^{-4}$ mm of mercury or of the variety of glass on the quality of the final product was noted. From the authors' summary.

DATE ACQ: 19Jun63 SUB CODE: CH, EL ENCL: 00

Card 2/2

BLYUMBERG, Ya.B., kand.tekhn.nauk; MIKHAYLIN, A.D., kand.khim.nauk; REMEN, R.Ye., kand.khim.nauk

Articles on mineral fertilizers. Priroda 53 no.1:66-72 '64.
(MIRA 17:2)

MIKHAYLIN, B.N., inzh.

Automatic [illegible] of the motion of [illegible] rubble [illegible] and the [illegible] process in DTV [illegible] with VTI furnaces. Energetik [illegible] [illegible]
[illegible]

[illegible]

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001033930003-9"

1. MIKHAYLIN, V. I.

2. USSR (600)

4. Electric Power Plants

7. Preparing diesel electric power plants for the winter. Mor. flot. 12, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

ZIMINA, M.A., inzh.; MIKHAYLIN, G.K., inzh.; TARASOV, S.M., inzh.

New D-612 scraper. Stroi. i dor. mash. 9 no.5:10 My '64.
(MIRA 17:6)

MIKHAYLIN, I.

Five new construction projects of Ul'yanovsk. Mest.prom.i khud. promys. 3 no.1:8 Ja '63. (MIRA 16:2)

1. Direktor Kombinata bytovogo obsluzhivaniya imeni 1 maya, Ul'yanovsk.

(Ul'yanovsk—Service industries)

MIKHAYLIN, Ivan Ivanovich; SMIRNOV, Anatoliy Ivanovich, inzh.; SHNEYDERMAN, K.A., red.; ABRAMOVA, Ye.A., tekhn.red.

[Swine plant; mechanized fattening center of the "Donsvinovod" State Farm] Fabrika svininy; mekhanizirovannyi otkormochnyi punkt sovkhoza "Donsvinovod". Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1960. 30 p. (MIRA 14:12)

1. Direktor sovkhoza "Donsvinovod", Kachetinskogo rayona (for Mikhaylin).
(Swine)

MIKHAYLIN, I. M., YERSHOVA, N. D. and KHVOSTIKOV, I. A.

"Measurements of the Brightness of the Green Line of the Night Sky," Iz. Ak. Nauk SSSR, Ser. geograf. i geofiz., No.2, pp. 217-21, 1939

Inst. Theoretical Geophysics, AS USSR

Translation 563844

MIKHAYLOV, I. M., BOVCHEVEROV, V. M., MIRONOV, A. V., MOROZOV, V. M., PONTSOVSKIY, Z. L., SOKOLOV, S. P. and KHVOSTIKOV, I. A.

"On the Connection Between the Anomolies of Polarization of Half-Light and the State of Ionization," C.R.Acad.Sci. URSS, 1949, Vol. 26, No.9, pp. 900-903.

SOV/51-5-6-6/19

AUTHORS: Rozenberg, G.V. and Mikhaylin, I.M.

TITLE: Ellipticity of Polarization of Scattered Light (Elliptichnost' polyarizatsii rasseyannogo sveta)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 6, pp 671-681 (USSR)

ABSTRACT: The paper describes experiments on the ellipticity of polarization of light scattered by the ground layers of atmosphere and on dependence of this ellipticity on the scattering angle. A visual polarimeter for measurement of all polarization characteristics of a light beam (degree of polarization, degree of ellipticity, position of the plane of predominant polarization) was constructed. This instrument is based upon the following theory. It is assumed that a light beam may be described by a Stokes vector-parameter S with respect to a certain plane of reference. A compensator is placed in the light beam; it introduces a phase shift τ and is rotated by an angle ψ with respect to the reference plane. Behind the compensator a polarizer, rotated by an angle $\chi = \psi + \varphi$ with respect to the reference plane, and an analyser

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which is rotated by an angle $\gamma = \chi + \delta$ w.r.t. the reference plane, are placed. By selecting various values of ψ and χ and by measurement of the angle η which corresponds to the condition of equal brightness of fields in a Wollaston prism (which is used in the place of a polarizer) one can find the degree of polarization p, the degree of ellipticity q and the angle of rotation of the major axis of the ellipse of polarization with respect to the reference plane ψ_0. The polarimeter was based on a theodolite with a diaphragm of 6° angular diameter. A quarter-wave plate and a Wollaston prism, which could separate two beams by 6°, were placed behind the diaphragm. The vertical plane passing through the optical axis of the theodolite was taken to be the reference plane. Behind the Wollaston prism a polaroid and a long-focus eyepiece were placed. The eyepiece produced a virtual image of the diaphragm. A SZS-16 light filter of 5 mm thickness was used to monochromatize the fields of view to be compared. The error of a single determination of η amounted to ±2°. The error in determination of the degree of ellipticity was less than ±0.03. Measurements were made on moonless nights in the second half of September in mountains of Northern Caucasus (750 m above sea level). Atmospheric aerosols were

Ellipticity of Polarization of Scattered Light

present in very small quantities. A projector, with a reflector of 150 cm diameter and an arc of 11.5 kW power, was used as the source of light. The projector was covered up completely except for an aperture of 40 cm diameter. A polaroid of 40 cm diameter was placed at a distance of 1 m from the projector. A large screen (5 x 5 m, with an aperture of 40 cm diameter was placed at a distance of 8 m from the projector (along the beam). This system produced a sharply defined linearly polarized beam of light at a height of 2 m above the ground level. The polarimeter was placed at 12 m from the screen and 2 m away from the light beam. The results are given in Figs 1-6. The ordinates give q, the degree of ellipticity of the scattered beam, as a function of the scattering angle ϑ, for various fixed angles ζ between the plane of polarization of the beam and the plane of scattering. Fig 1 gives $q(\vartheta)$ for $\zeta = +45^\circ$ in the absence of mist. Figs 2 and 3 show curves of $q(\vartheta)$ for $\zeta = +45^\circ$ in a thick haze with a rainbow (curves 1) and in a slight haze (curves 2). The maximum of q, which is characteristi of

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a rainbow, occurs also when no haze is present (Fig 4), probably due to large drops of moisture present in the air. Curves 1 and 2 of Fig 5 were obtained for $\zeta = -45^\circ$ and $\zeta = +45^\circ$ respectively. Fig 6 shows results for $\zeta = 0^\circ$ (open and black dots) and $\zeta = +90^\circ$ (crosses and half-black dots). There are 6 figures and 1 Soviet reference.

SUBMITTED: January 6, 1958

Card 4/4

24(4) SOV/20-122-1-16/44

AUTHORS: Rozenberg, G. V., Mikhaylin, I. M.

TITLE: The Experimental Detection of the Ellipticity of the Polarization of Scattered Light (Eksperimental'noye obnaruzheniye ellipticheskosti polyarizatsii rasseyannogo sveta)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 62-64 (USSR)

ABSTRACT: The purpose of this paper is to find preliminary data concerning the degree of the ellipticity of light scattered by the lowest layers of the earth atmosphere and concerning the character of its dependence on the scattering angle. A theodolite, in the focal plane of which a diaphragm of the angular diameter 6° was placed, was used as a polarimeter. The authors immediately measured the angles η in which the brightness of both the photometric fields was equal. η denotes the angle of rotation with respect to the vertical direction. The degree of the ellipticity q of the incident light was found by means of the relation $q = (\cos 2\eta_+ - \cos 2\eta_-)$. By choosing other values of certain angles, it is possible to determine the degree of the

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The Experimental Detection of the Ellipticity of the Polarization of Scattered Light

polarization of the light and the angle ψ_0 of the inclination of the plane of the principal polarization with respect to the vertical direction. The experiments were carried out during moonless nights in the second half of September 1957 on the foothills of the Northern Caucasus. A projector was placed in a comparatively narrow valley, its horizontal light beam was directed along the valley. The carrying out of the experiment (places of the polarimeter etc.) are discussed in short. Because of the comparative pureness of the air, the scattered air was rather faint, and the visual methods took a long time and were not very precise. According to theoretical considerations an ellipticity of the polarization of the scattered light will be observed only as a result of the scattering on an aerosol and it will have a maximum for $\xi = \pm 45^0$, if the irradiating beam is linearly polarized in a direction which includes the angle ξ with the plane of scattering. The ellipticity distinctly depends on the scattering angle, approximately satisfying the relation $\sim \cos 3\,\Theta$. In the extrema $q \sim 0,1$ which is not a low value. A second diagram shows the function $q(\Theta)$ for 2

The Experimental Detection of the Ellipticity of the Polarization of Scattered Light

cases of more or less dense fog. A zone of irridescence (θ = 150 - 140°) (in which q ~ 0,5) and a change of the sign of q in the region θ ~ 40 - 90° were observed. Sometimes, the irridescent region was observed also in cases without an actual fog. This is an argument in favor of the presence of an aerosol fraction consisting of large drops in the air. The values of the degree of polarization were within the limits 0,68 - 0,76. From a theoretical point of view, the ellipticity of the polarization of the scattered light is not a surprising phenomenon. There are 3 figures and 1 Soviet reference.

PRESENTED: March 8, 1958, by V. V. Shuleykin, Academician

SUBMITTED: March 2, 1958

3.5150

S/169/62/000/003/052/098
D228/D301

AUTHORS: Rozenberg, G. V., Rudometkina, N. D. and Mikhaylik, I. M.

TITLE: Angular relation of the matrix of dispersion of atmospheric light (Theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 27, abstract 3B219 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 215-216)

TEXT: The components of the matrix of dispersion for atmospheric air were determined experimentally. The observations were made on the foothills of the North Caucasus in September 1957. Photographic and visual measurement procedures were used. Some persistent features of the angular relations of the dispersion matrix components which are characteristic for the presence or absence of fog, are mentioned. The marked ellipticity of the polarization of scattered light was established. [Abstracter's note: Complete translation.]

Card 1/1

L 52049-65 EWT(l)/EWG(v)/FCC/EEC(t) Pe-5/Pl-4 GS/GW
ACCESSION NR: AT5011167 UR/0000/64/000/000/0134/0135

39
38
B+1

AUTHOR: Driving, A. Ya.; Mikhaylin, I.M.; Rozenberg, G.V. (Professor)

TITLE: Some data on the polarization of light scattered in the surface layer of the atmosphere *

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. 5th, Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 134-135

TOPIC TAGS: atmospheric optics, atmospheric surface layer, light polarization, photometer, mist, fog

ABSTRACT: Observations of the components of the matrix of scattering characterizing the scattering function $f_{11}(\vartheta, \lambda)$ and the polarization of scattered light $f_{21}(\vartheta, \lambda)$ were made in September and October 1961 at Zvenigorod by the Institut fiziki atmosfery (Institute of Atmospheric Physics). Measurements were made in mist and fog with a DFS-14 diffraction spectrometer having a line dispersion on the second order of 6 A/mm in the region of wavelengths 4000-5500 A. The sensor was an FEU-19 photomultiplier; a searchlight was the light source. The same scattering volume for a parallel beam of rays was viewed by a photometer moving along rails in a range of scattering angles from 20 to 165°. A

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polaroid was mounted at the photometer aperture and could be oriented at several angles to the scattering plane. In the case of mist the polarization maximum was in the region of ϑ from 90 to 110°. The transition of mist into fog was characterized by the appearance of a large number of maxima in the region of scattering angles ϑ greater than 115° and less than 80°. Due to the large resolution of the instrument it was possible to detect clearly the interference character of the polarization curves in the case of a persistent (over 6 hours) fog of very fine water droplets. There is a maximum of positive polarization on the curves corresponding to a primary rainbow at ϑ = 142-143° and a secondary rainbow at ϑ = 136-137°; there also were peaks at ϑ = 130, 150 and 157° and a number of peaks at ϑ < 130°. In the case of an unstable fog the polarization curves show enlargement of fog droplets and the inverse process. In three hours of observations the maximum corresponding to the primary rainbow at ϑ = 145.0° was displaced to ϑ = 138.0-139.0° with a sharp increase in polarization and development of secondary peaks of equal magnitude at ϑ =120.0 and 145.0° and a somewhat greater peak at ϑ = 133.0°. At the end of the measurements, when the fog began to dissipate, the polarization curves began to be blurred; the main peak (primary rainbow) remained at ϑ = 140.0°, as did a smaller peak at ϑ = 150.0° and a third at ϑ = 120.0°. Several polarization curves obtained during a rain were characterized by a sharply expressed maximum of the primary and secondary rainbows and a very large number of secondary peaks for the region of scattering angles 115.0° < ϑ < 70.0°. Comparison of the f_{21}/f_{11} and f_{11} curves shows that the effects of scattering,

L 52049-65
ACCESSION NR: AT5011167

depending on the nature and size of the particles, are manifested considerably more strongly in data on the polarization of scattered light. It is noted that the full text of this article is to be published in an unspecified issue of Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1964.

ASSOCIATION: Institut fiziki atmosfery AN SSSR, Moscow (Institute of Atmospheric Physics, AN SSSR)

SUBMITTED: 25Nov64 ENCL: 00 SUB CODE: ES

NO REF SOV: 000 OTHER: 000

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L 34957-65 EWT(1)/EWG(v)/FCC/EEC(t) Pe-5/Pi-4 GW

ACCESSION NR: AP5007600 S/0362/65/001/001/0114/0118

AUTHOR: Bosh'yev, K. I. (Deceased); Driving, A. Ya.; Malkov, I. P.; Mikhaylin, I. M.; Rozenberg, G. V.; Turkin, G. D.

TITLE: Field-type spectrophotographic goniometer

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 1, 1965, 114-118

TOPIC TAGS: goniometer, spectrophotographic goniometer, diffraction spectrometer, atmospheric optics, atmospheric physics, scattering matrix, atmospheric polarization, snow reflectivity

ABSTRACT: A spectrophotographic goniometer built at the Zvenigorodsk scientific base under G. V. Rozenberg and featuring a high measurement rate is described. It is organized around the DFS-14 diffraction photoelectric spectrometer which is discussed in detail. Provision for the use of two light receivers facilitates shifting from one spectral range to another. Test operation shows that despite its bulkiness, this arrangement is sufficiently convenient and reliable and makes possible a wide range of investigations, e.g., it has been used to measure the angular and spectral dependence of various components of the scattering matrix

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L 34957-65
ACCESSION NR: AP5007600

of atmospheric air under various meteorological conditions, to measure the spectra and polarization of the daytime and twilight sky, and to study the spectral and angular dependence of the reflective power of snow. Orig. art. has: 5 figures.

ASSOCIATION: Institut fiziki atmosfery, Akademiya nauk SSSR (Atmospheric physics Institute, Academy of sciences, SSSR)

SUBMITTED: 27Apr64 ENCL: 00 SUB CODE: OP, ES

NO REF SOV: 003 OTHER: 000

Card 2/2

L 08525-67 FSS-2/ENT(1)/EEC(k)-2/FCC IJP(c) JGS/TT/GW
ACC NR: AP6034771 (A) SOURCE CODE: UR/0362/66/002/010/1041/1054

of the aerosol layer at a height of about 19 km, thus verifying the earlier evaluation. Additional information as to the seasonal and geographic variations of the height structure of the layer and absolute values of the coefficient of scattering at different heights is believed necessary in order to determine the origin of the layer. Orig. art. has: 8 figures and 24 formulas.

SUB CODE: 22, 04/ SUBM DATE: 07Jun66/ ORIG REF: 010/ OTH REF: 001/ ATD PRESS: 5103

MIKHAYLIN, I. Ya.; PULAVIN, V. F.

Forest Management

For improvement of financial operations in shelterbelt stations. Les. khoz. 5 no. 7, 1952

9. Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

ROZHDESTVENSKIY, M.; MIKHAYLIK, I.

Trade-Unions

Work of the [illegible] [illegible]

9. Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

MIKHAYLIN, S.Ye.

Role of kidney ischemia in the pathogenesis of hypertension.
Klin.med. 38 no.9:96-103 S '60. (MIRA 13:11)
(HYPERTENSION) (KIDNEY--BLOOD SUPPLY)

MIKHAYLIN, V.

Modern submarine boats and means for detecting them as revealed by foreign press data. Voen. znan. 37 no.10:25-26 O '61. (MIRA 14:9)

(Submarine boats--Recognition)

BAKHTIN, V.I.; MIKHAYLIN, V.N.

Self-compensated thermal vacuum manometer. Izm.tekh. no.9: 25-26 S '60. (MIRA 13:9)
(Electronic instruments) (Vacuum gauges)

KAZAKOV, K.P., marshal artillerii; RUDENKO, S.I., marshal aviatsii; MIKHAYLIN, V.V., kontr-admiral; LEONOV, A.I., marshal voysk svyazi

Soviet military leaders on the revolution in military affairs. Voen.znan. 40 no.11:36 N '64. (MIRA 18:1)

1. Komanduyushchiy raketnymi voyskami i artilleriyey (for Kazakov). 2. Pervyy zamestitel' Glavnokomanduyushchego Voyenno-Vozdushnymi Silami (for Rudenko). 3. Pervyy zamestitel' komanduyushchego Krasnoznamennym Baltiyskim flotom (for Mikhaylin). 4. Nachal'nik voysk svyazi (for Leonov).

L 21995-66 EWT(m)/EWP(t IJP(c) JD

ACC NR: AP6006967 SOURCE CODE: UR/0368/66/004/002/0174/0176

AUTHOR: Mikhaylin, V. V.; Brzhezinskiy, V. A.

ORG: none

TITLE: The production of thin films of activated CaS by the cathode sputtering method

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 2, 1966, 174-176

TOPIC TAGS: thin film, calcium sulfide, crystal phosphor, luminescence spectrum

ABSTRACT: In view of the interest shown in the structure of the fundamental absorption of crystals in the group IIA-VIB, there arose a need for the production of thin films of these substances with a layer less than 0.2 μ thick. The present authors use the method of cathode sputtering for the production of CaS, one of the compounds of the group. The procedure and the equipment used in the experiments are described. Experiments on the transference of a calcium sulfide-based crystal phosphor (CaS-Bi, Mn) showed that the film produced after annealing in a vacuum at 400—600C, on excitation in the 270 nm region exhibited luminescence similar to that of the initial substance. This confirms the possibility of producing thin luminescent films of multicomponent systems by the method

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L 21995-66
ACC NR: AP6006967

employed. The method may also be used successfully for the production of thin films and other compounds in the IIA-VIB group. Orig. art. has: 2 figures.

SUB CODE: 07, 20 / SUBM DATE: 14Apr65 / ORIG REF: 004 / OTH REF: 003

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L 36321-66 EWT(l)/EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) GG/WH/JD

ACC NR: AP6015790 (A,N) SOURCE CODE: UR/0048/66/030/005/0877/0880

AUTHOR: Luk'yanov, A. Yo; Spivak, G. V.; Mikhaylin, V. V.

ORG: Physics Department, Moscow State University im. M.V.Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Cathode sputtering of dielectrics in a high frequency field /Report, Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in Leningrad 22-25 October 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 877-880

TOPIC TAGS: cathode sputtering, dielectric material, quartz, calcium compound, sulfide, HF, electric field

ABSTRACT: Thin films of quartz and calcium sulfide were obtained by cathode sputtering in a high frequency field. The sputtering took place in a glass tube containing neon or argon at a pressure of the order of 0.01 mm Hg, in which a 0.1 to 5 A hot cathode arc discharge was maintained. A 100 to 500 Oe longitudinal magnetic field was employed to stabilize the arc. An up to 3 kV alternating potential difference at a frequency between 2 and 12 MHz was applied between the holder of the sputtered dielectric and the substrate holder. Difficulties with parasitic oscillations and overheating of the sample, leading to undesired thermal deposition, were experienced when

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